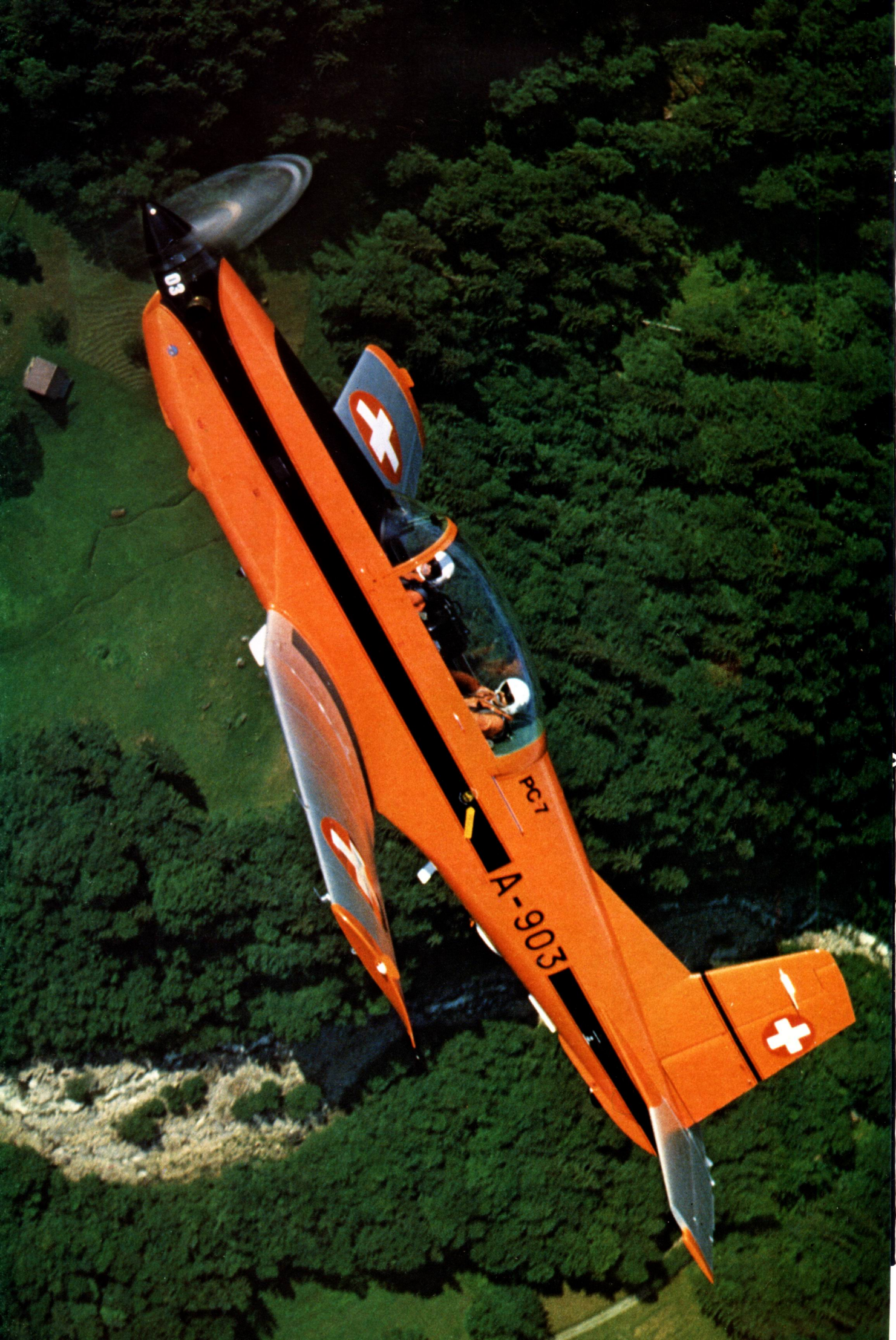


# PC-7

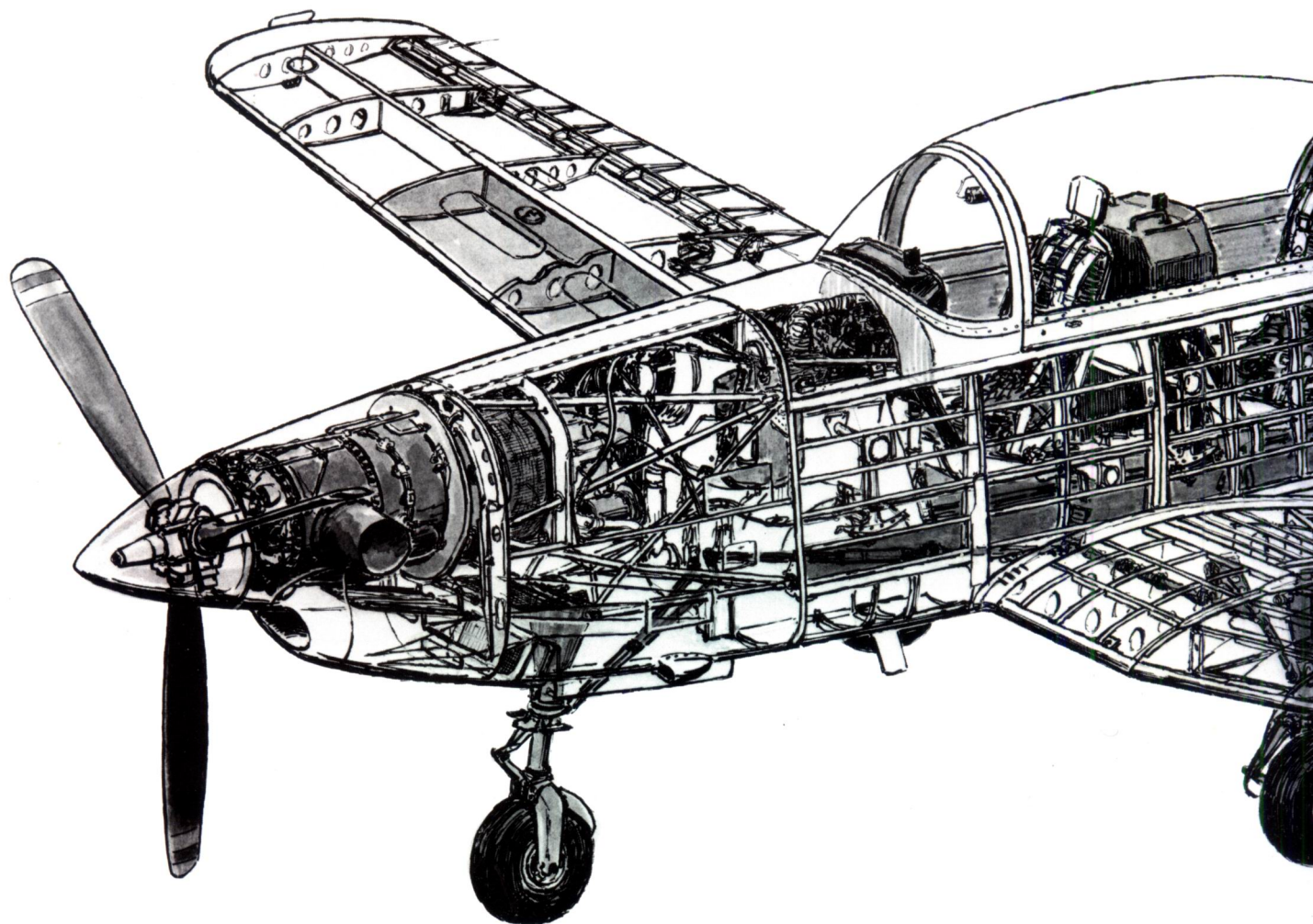
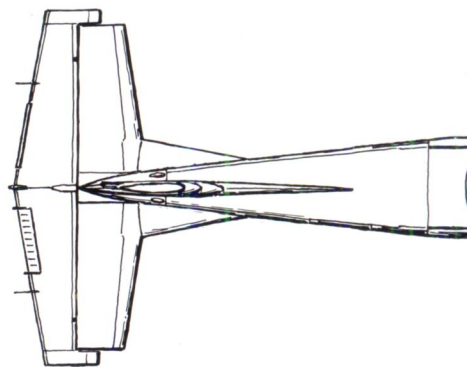
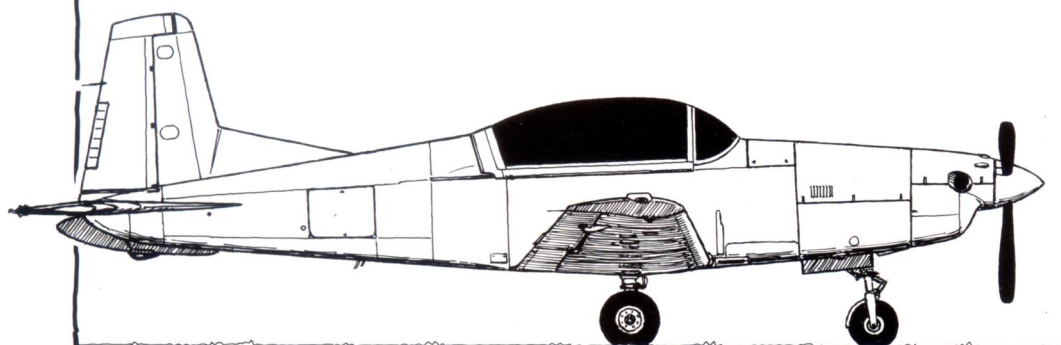
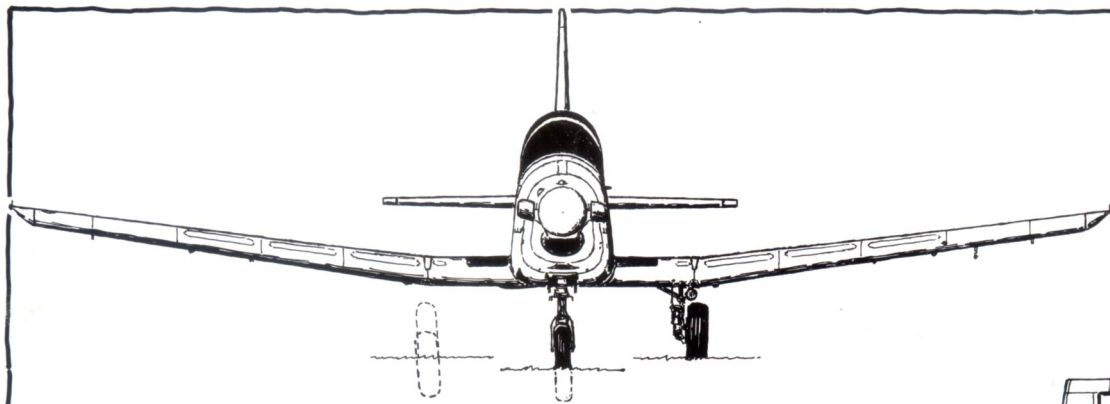
**TURBO TRAINER**



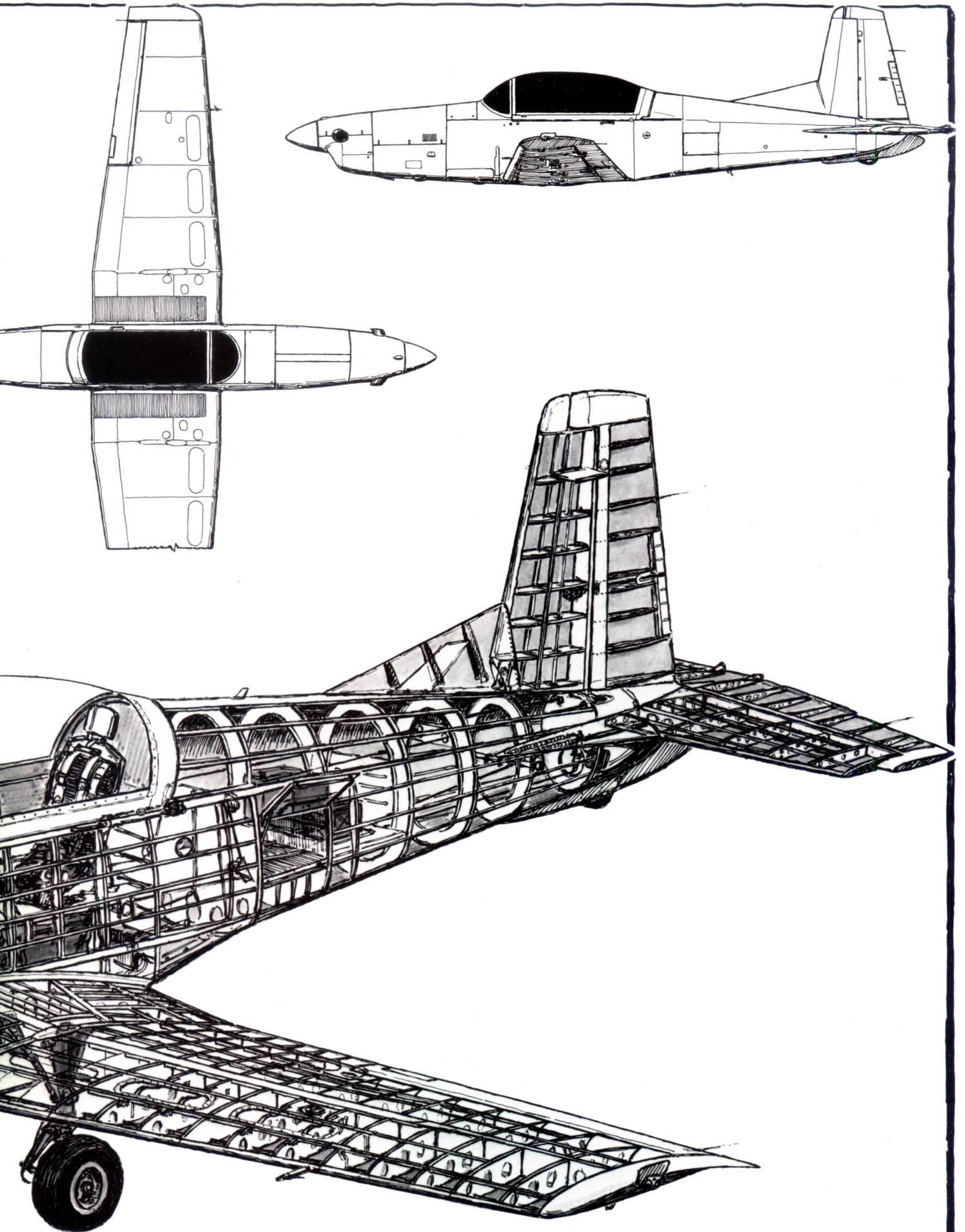














**Facts and figures  
about the  
PILATUS PC-7  
TURBO TRAINER**



# WHY

## Why is the PC-7 so successful ?

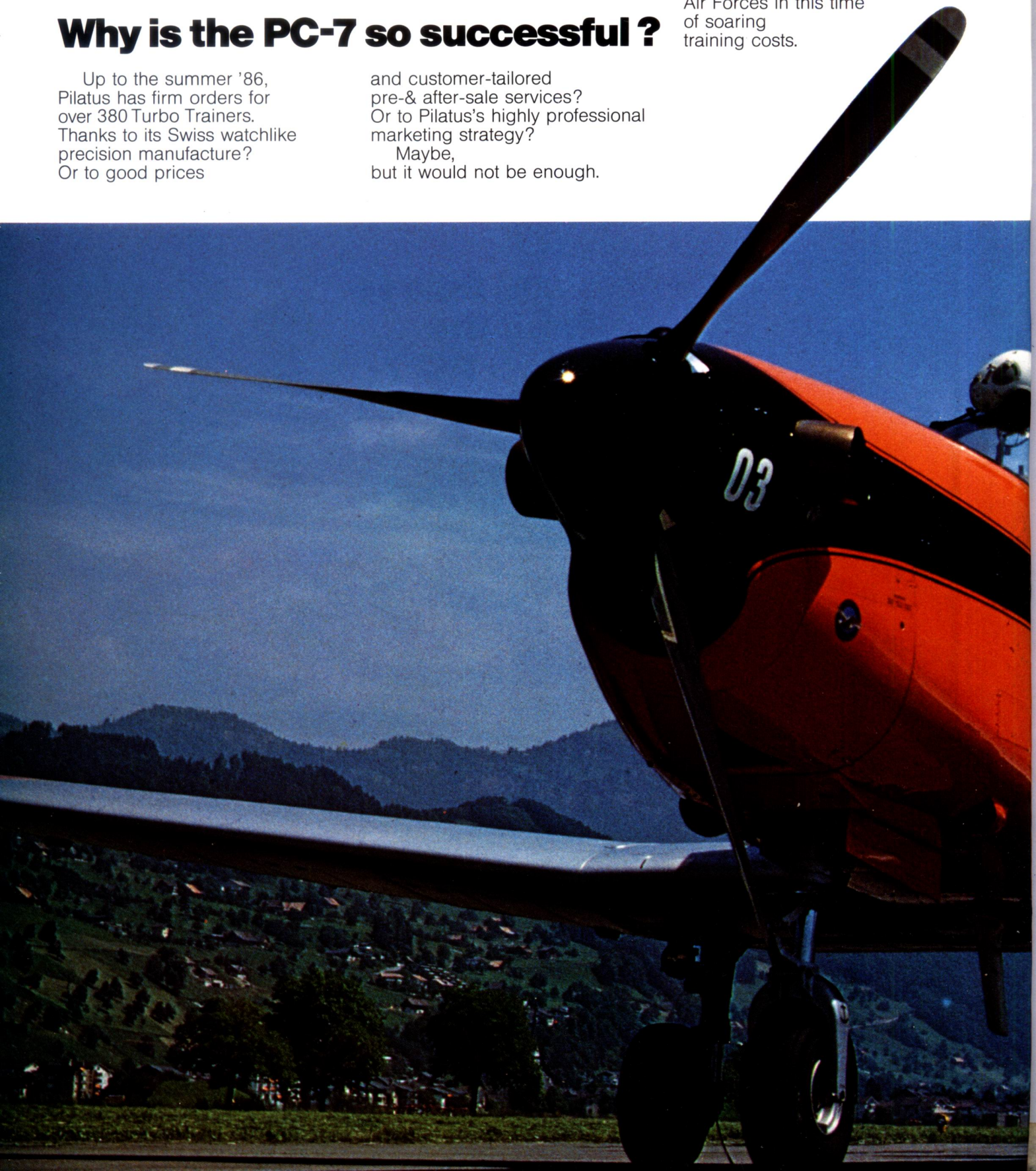
Up to the summer '86,  
Pilatus has firm orders for  
over 380 Turbo Trainers.  
Thanks to its Swiss watchlike  
precision manufacture?  
Or to good prices

and customer-tailored  
pre-& after-sale services?  
Or to Pilatus's highly professional  
marketing strategy?

Maybe,  
but it would not be enough.

The main reason is obvious.  
The right T-bird at the right time,  
made by  
the most experienced company  
in the turboprop-powered trainers'  
field!

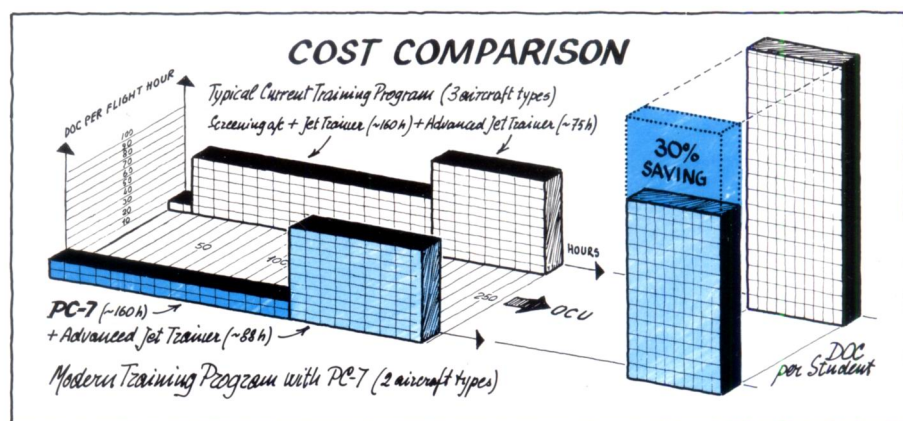
Military men have understood it  
and praise this  
thoroughly modern, professional  
and cost-effective aircraft,  
which perfectly fulfills  
the needs of both large and small  
Air Forces in this time  
of soaring  
training costs.





In fact, the PC-7 — with global performance still unmatched by newer types boasted as "designed from the outset around a turboprop", and its unusual wide-spectrum training capability — can cut the training expenditure by a good 30 percent, extending the basic phase into the advanced instruction realm, previously occupied by costly and thirsty jet trainers.

As a bonus, the PC-7 offers the advantage of familiarizing the pupils both with turbine power and with propeller tricks from the earliest phase of training. Operational propeller-driven aircraft still have, after all,



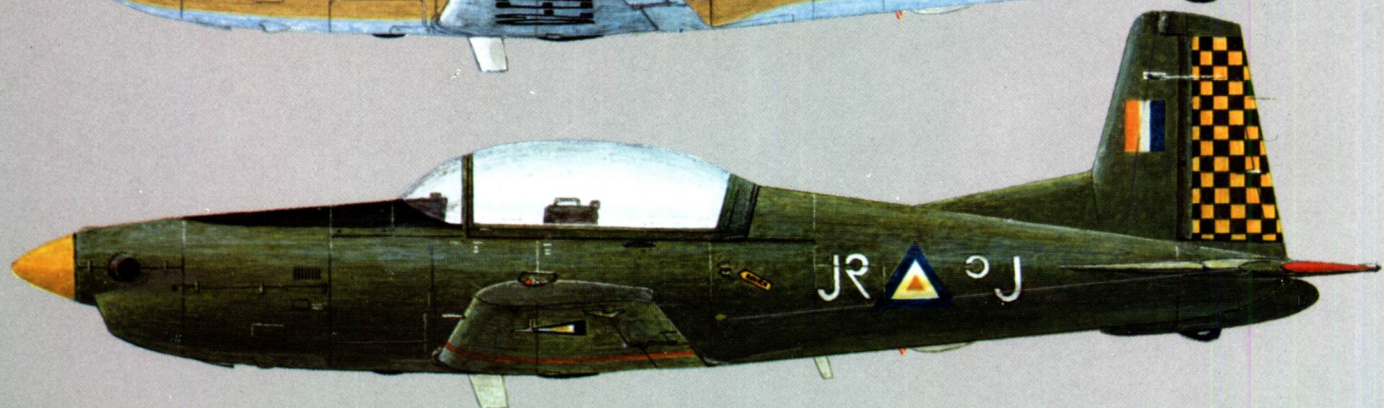
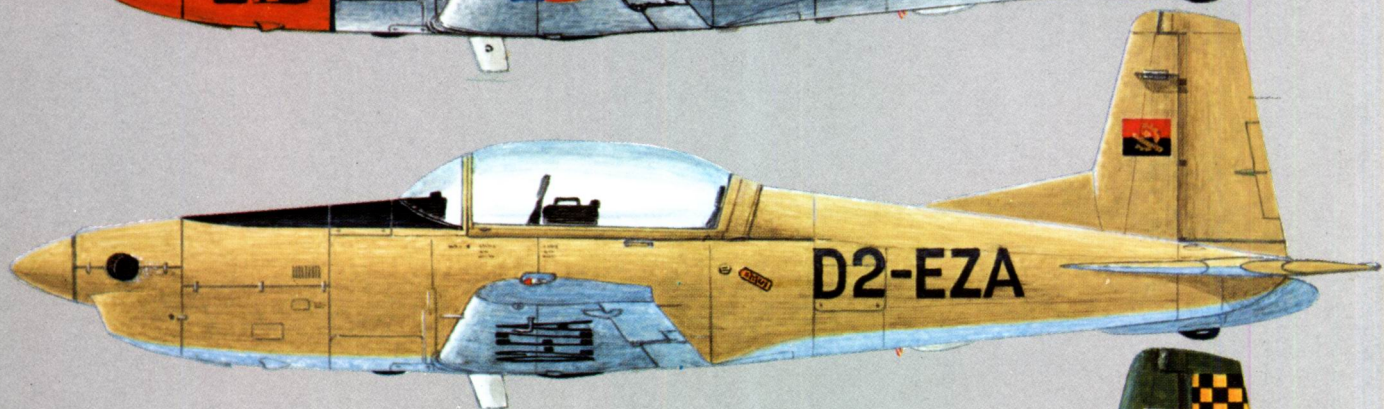
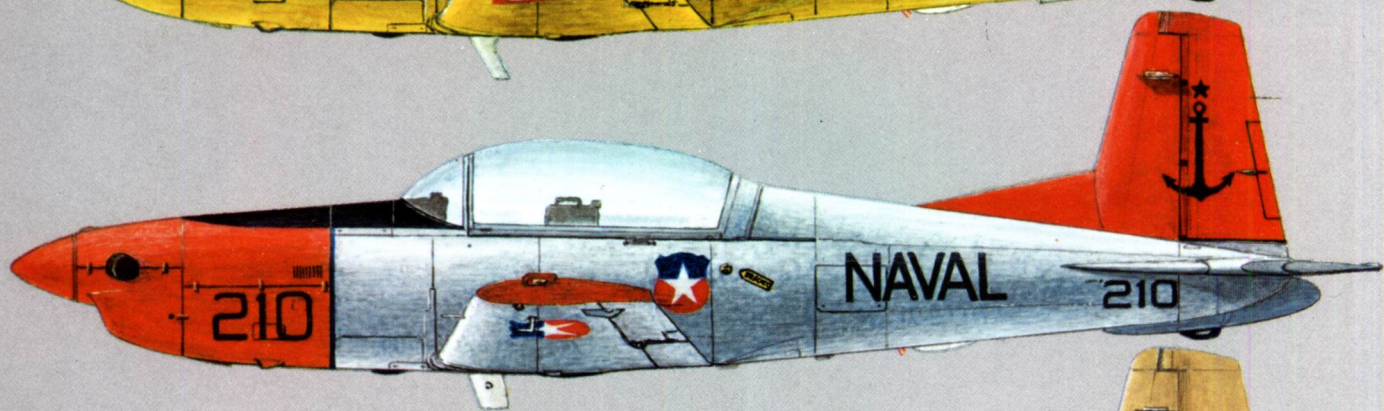
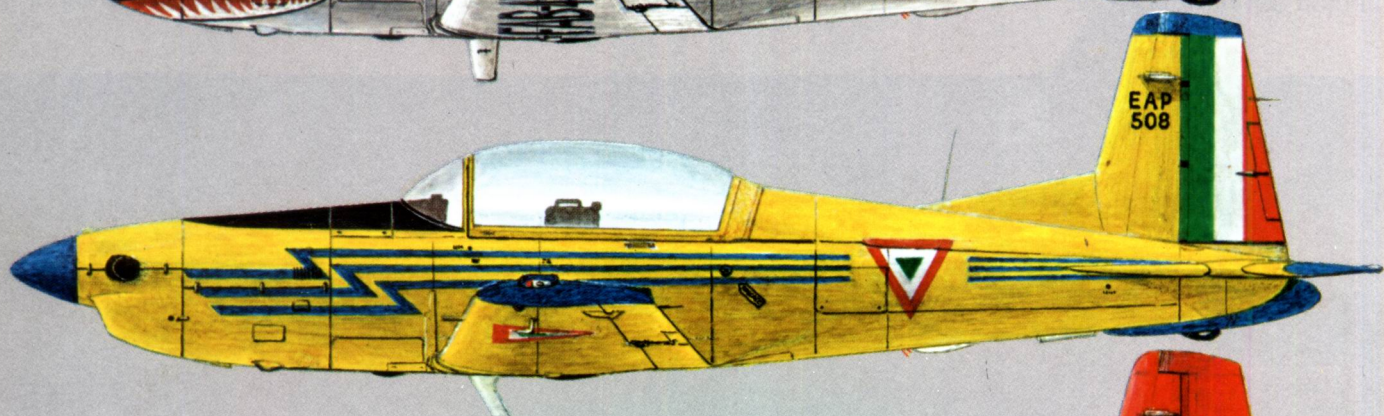
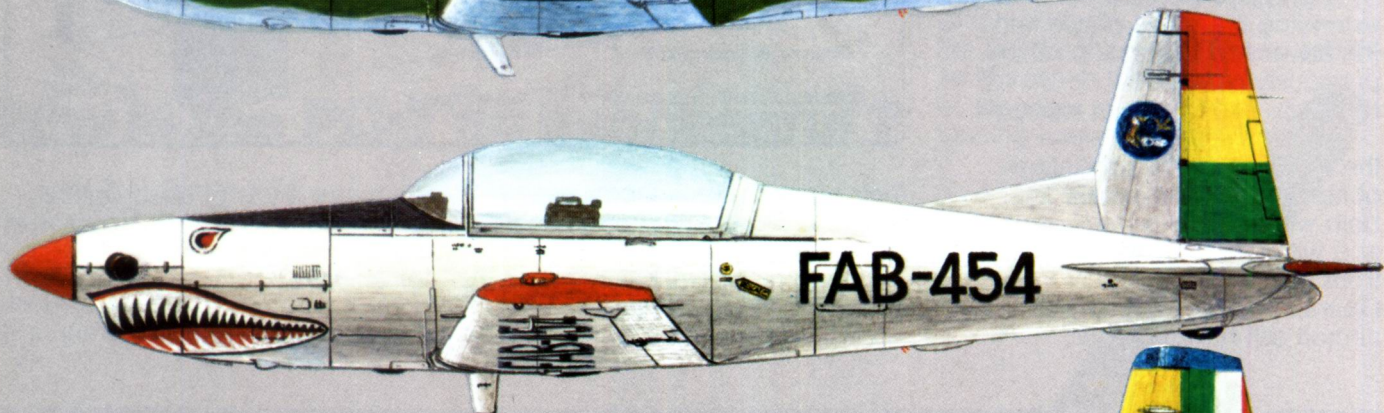
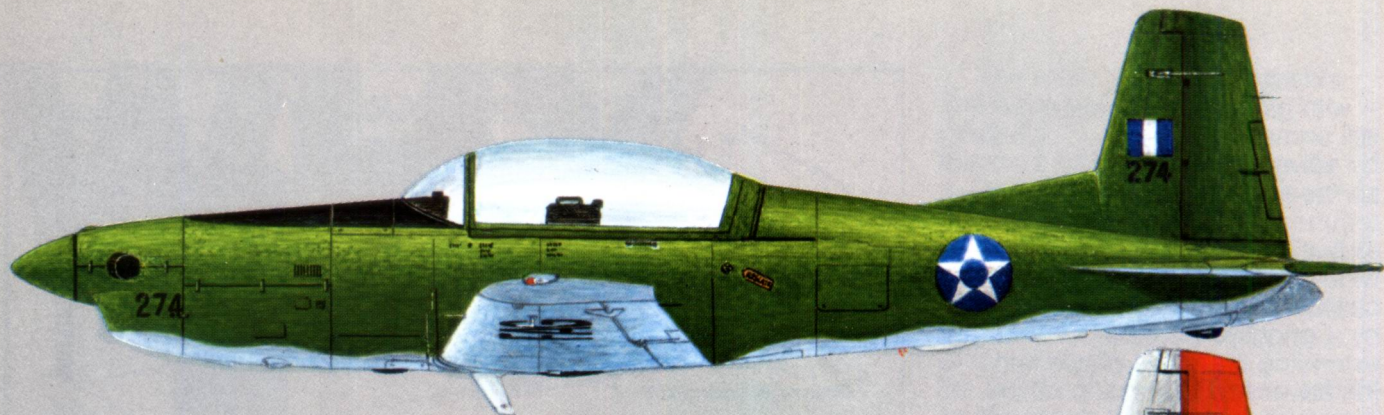
their good share in the inventory!

So, while most PC-7-trained pupils will perform the transition straight to F-5-class first-line aircraft,

the future pilots of observation, liaison, transport or ASW airplanes will be happy for the invaluable experience gained by flying the propeller-driven PC-7.









# WHO

13 Air Forces, one airline and 3 lucky private owners are today our fully satisfied customers.

Praises come not only from the actual operators but also from the evaluation teams of such countries as Canada, France, Germany, Great Britain and Austria that have tested the PC-7 thoroughly or have contributed in the development work.

And many more Air Forces are expected to choose the PC-7 in the near future.

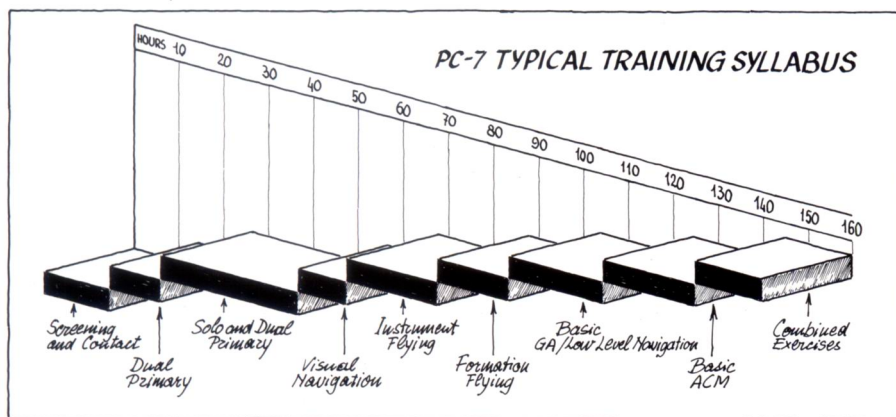
## Who flies the PC-7?





# WHAT

## What can the PC-7 do for you?



The PC-7 Turbo Trainer has a multirole nature.

In addition to its usual activity as a basic/advanced trainer — which covers such exercises as dual and solo general flying, aerobatics, formation flying, navigation,

night and instrument flying and gunnery training — the PC-7 is at ease when used for forward air control, reconnaissance, aerial mapping, liaison, SAR missions, and so on.

Six underwing hardpoints (two wet) help a lot, allowing an external load capability of 1,040 Kg and an uncompromised range.

The crew enjoy roomy and functional cockpits, plenty of instruments and avionics, air conditioning and — if needed — oxygen for high altitude operation.

Visibility by both pilots is simply superb: try and see!

Crisp and positive controls with excellent harmonisation, power galore and the right combination of manoeuvrability and stability in a true jetlike environment, make the PC-7 delightful to fly.

Anyone who has flown the Turbo Trainer, appreciates its performance and behaviour under all flight conditions.

Unrestricted spins and 30 seconds of inverted flight satisfy the most demanding pilot.

But straightforward handling and confidence-inspiring behaviour doesn't imply a lack of teaching qualities: tolerant with a zero-hours student, the PC-7 is demanding enough to be a very formative, professional pilot-maker.

A last point: in crowded areas, the PC-7 is a good neighbour: its noise level is as low as 73 db for an overflight at 1,000 ft.





















# HOW

## How is the PC-7 built ?

The PC-7 Turbo Trainer is a series-produced aircraft built with the very same carefulness that has made the Swiss handicraft famous the world over. It brings along more than forty years of experience by Pilatus in producing excellent aircraft.

At the root of the PC-7 design is the sound philosophy of combining a classic metal airframe manufactured according to proven technologies with a sober, reliable engine installed on the most successful aircraft and helicopters in the same power category.

The airframe design is the best compromise between simplicity, lightness and ruggedness and has been conceived with maintainability in mind.

The engine is the -25A version of the famous PT6A, which requires little more than topping up fuel and oil — its initial TBO being in excess of 3,000 hours — and is provided with a highly efficient ice protection system based on an inertial separator.

The cockpit layout is an example of ingenious application of the most recent research

in human engineering and its truly jet-like aspect is enhanced by a 16-window annunciator panel and by an angle-of-attack indexer as a landing aid.

The avionics can be mission-tailored following the operator's requirements.

The actual use of the PC-7 under all climatic conditions has amply demonstrated qualities and virtues of this Pilatus product.

The PC-7 is certified to FAA (FAR 23) standards and complies with some important US-MIL specifications and with the Swiss Federal Office for Civil Aviation regulations.





# WHEN

## When does the PC-7 fly?

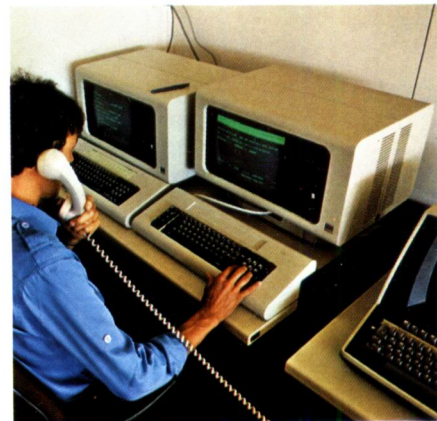
"Always"... would be the answer of our advertising man; but — as you know — ad men are a little biased.

More realistically, we can assure up to 80 percent availability averaged by the training schools operating the PC-7.

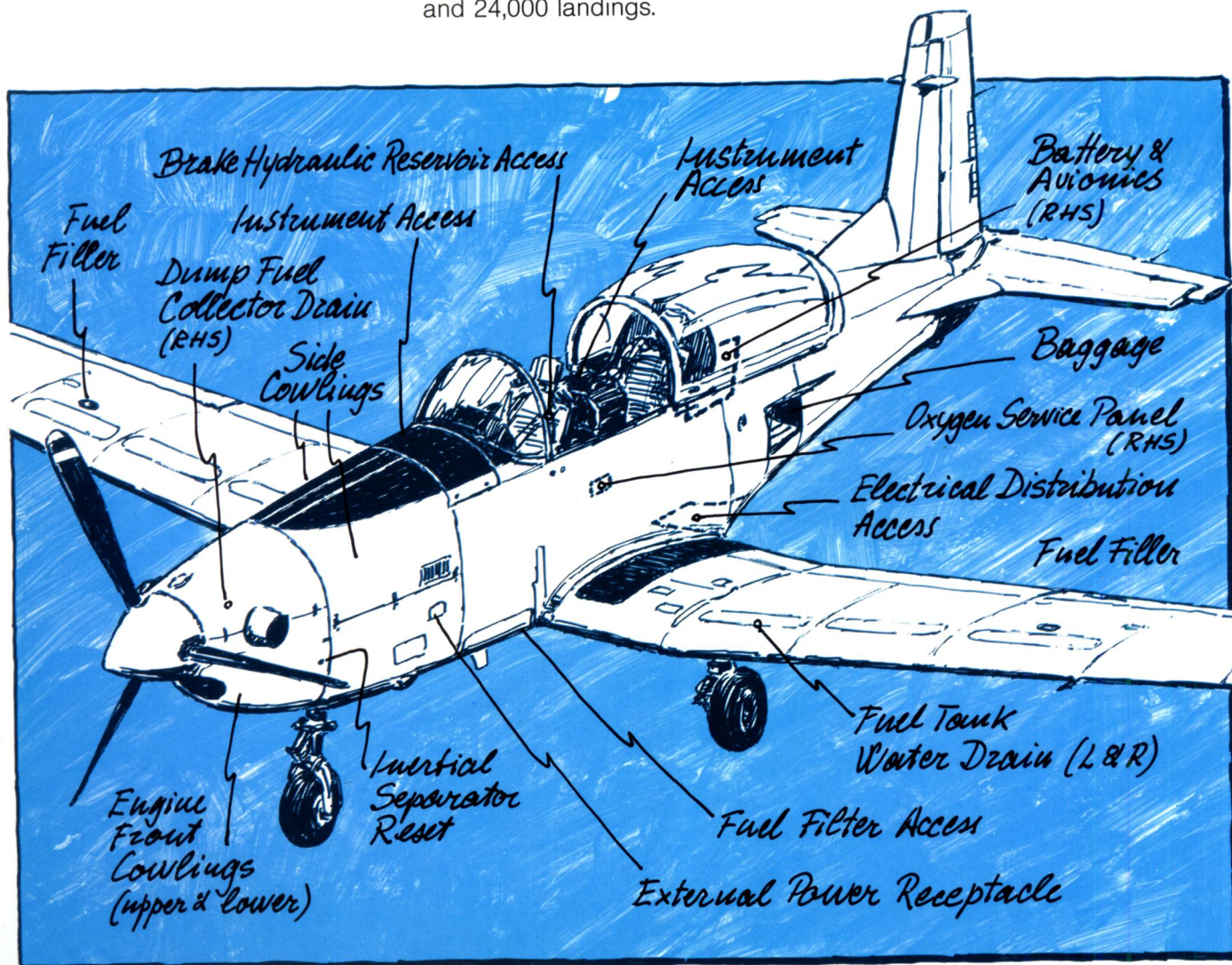
In fact, the Turbo Trainer is one of the easiest aircraft to maintain: no hydraulics, sturdy landing gear, simple, mechanical

control linkages, reliable engine and quick access to all systems and components bring down to less than one hour the maintenance time for each flying hour.

Robust structure, high quality materials, anticorrosion treatments, extremely careful construction methods and the famous Swiss craftsmanship provide an outstanding reliability and an estimated service life of 12,000 hours and 24,000 landings.



And, if some pupil even succeeds in damaging the sturdy PC-7, our twentyfour-hour-a-day spare parts service can deliver a minor component or an entire wing in a very short time to every spot of the world.









# WHERE

## Where is the PC-7 made?

It is made in Switzerland, at Stans, on the Lake of Luzern, by Pilatus Aircraft Ltd, today the largest Swiss aerospace company.

Pilatus Aircraft Ltd, which was established in the far-off 1939, is an important member of the Automotive Division of the powerful Oerlikon-Bührle Group.

The Group's activities are much diversified and, in particular, are relevant to the industrial, technical, and scientific fields.

Besides the PC-7, Pilatus can claim another outstanding success: the well-known PC-6 Turbo Porter that is flown by proud operators in more than fifty countries.

Pilatus's other important activity is the manufacture under license of parts and assemblies for various civil and military aircraft, as well as the maintenance, repair and overhaul of a wide range of airplanes and helicopters.







Pilatus's strong belief is that an excellent product cannot live without an excellent Product Support Service.

So, comprehensive theoretical and practical familiarization courses for both pilots and engineers are regularly held at Stans.

Fully equipped classrooms and PC-7-all-knowing teaching personnel are there at hand.

This way, surrounded by the renowned Swiss hospitality, in a couple of weeks the attendants get to know the PC-7 Turbo Trainer down to the last screw.





All illustrations and information  
contained in this brochure  
are based on  
the latest product information available  
at time of publication approval.  
Pilatus reserves the right  
to make modifications or changes  
at any time,  
following its policy  
of continuous product improvement.



# Technical data

## Fuselage

The front section consists of a welded steel tube structure, supporting the engine and the nose landing gear. Cowlings are removable or hinged.

The center section is an all-metal semi-monocoque structure, containing the two tandem cockpits, with adjustable seats and duplicated controls and instruments. The electrically- or hand-operated, rearward-sliding canopy is jettisonable.

The aft section is a monocoque shell with stringers and bulkheads and contains the baggage (25 kg) and the battery/avionics compartments.

## Wing assembly

One-piece all-metal single-spar structure, with auxiliary spar, ribs and stringer-reinforced skin. Six underwing hardpoints with maximum total load capability of 1,040 kg.

Wing section NACA 64<sub>2</sub>A 415 (15% chord thickness) at root and NACA 64<sub>1</sub>A 612 (12% chord thickness) at tip. Dihedral 7° on outer panels.

Plain mass-balanced ailerons, mechanically-operated by push rods; trim tab in port aileron. Split trailing-edge flaps, covering the full span between the ailerons and electrically operated.

## Tail unit

All-metal cantilever structure of the same design as the wing. Fin and stabilizer fairings of fiberglass reinforced polyester.

All moveable surfaces are mass-balanced and cable-operated.

Trim tabs in rudder and elevator (starboard side).

## Landing gear

Tricycle type, with main wheels electrically retracting inward and nosewheel rearward. Emergency manual extension.

6.50 - 8/8 main wheel tyres.

6.00 - 6/8 nose wheel tyre.

Oleo-pneumatic shock-absorbers struts. Castoring nosewheel with shimmy dampers.

Triple spot disc hydraulically-operated brakes on the main wheels. Parking brake.

## Powerplant

One 485 kW (650 shp) Pratt & Whitney Aircraft of Canada PT6A-25A turboprop engine, flat rated to 410 kW (550 shp) at S/L, driving a Hartzell HC-B3TN-2 three-blade, constant-speed, fully-feathering propeller with spinner.

Oil scavenge system providing uninterrupted lubrication during inverted flight up to 30 sec; fuel/oil heat exchanger.

An inertial separation system is integrated, and protects the engine in falling snow and icing conditions.

Electrical propeller de-icing system optional.

## Systems

**Fuel** — Integral tanks in outer wing panels, feeding a center (aerobatic) tank in the forward fuselage. Total usable capacity 474 litres. Fuel system permits more than 30 seconds of inverted flight. Provision for two underwing drop-tanks.

**Electrical** — 28V DC with 200A starter-generator and 44Ah nicad battery. Two static inverters as AC power supply.

**Heating and ventilating** — Independent front/rear floor and windshield outlets fed by ram air and engine bleed air.

**Air-conditioning** — Freon-type, with engine-driven compressor and fan-cooled condenser; evaporator-blower units in each cockpit.

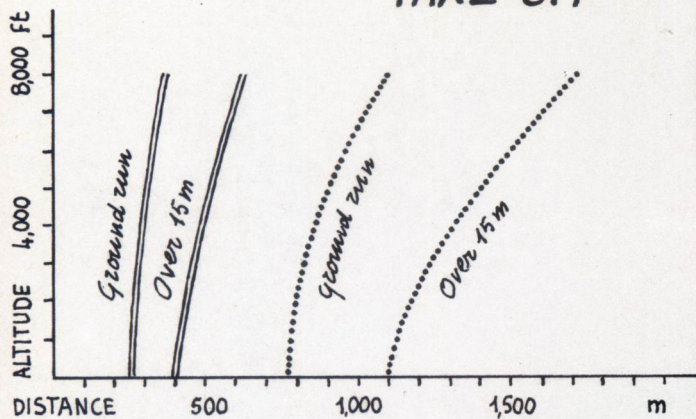
**Oxygen** (optional) — Diluter/demand type, with individual control units. Capacity 1,367 litres.

**Instrument and avionic** — Flight and engine instruments in both cockpits. Duplicated master caution/annunciator lights and AOA indicators with stall warning horn standard. Com/Nav radios in accordance with customer's request.

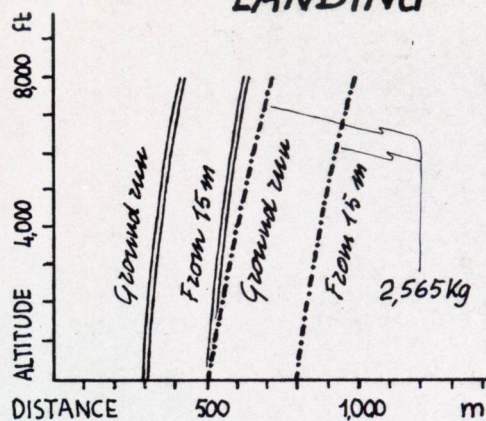
		Aerobatic		Utility
Wing span	10-400 m			
Length overall	9-775 m			
Height overall	3-210 m			
Wing area	16-600 m			
Empty weight	1,330 kg			
Max landing w.	(aerobatic) 1,900 kg - (utility) 2,565 kg	Max operating speed (V <sub>MO</sub> )	270 kts	270 kts
Max T-O weight	(aerobatic) 1,900 kg - (utility) 2,700 kg	Manoeuvring speed (V <sub>A</sub> )	175 kts	181 kts
Wing loading	(aerobatic) 114-500 kg/m <sup>2</sup>	Max speed, flaps/gear down	135 kts	135 kts
		Stalling speed (power off) (V <sub>SO</sub> )	63.5 kts	74 kts
		Limit load factor at V <sub>C</sub>	+6/-3 g	+4.5/-2.25 g
		C of G limits	18/28% MGC	22/28% MGC



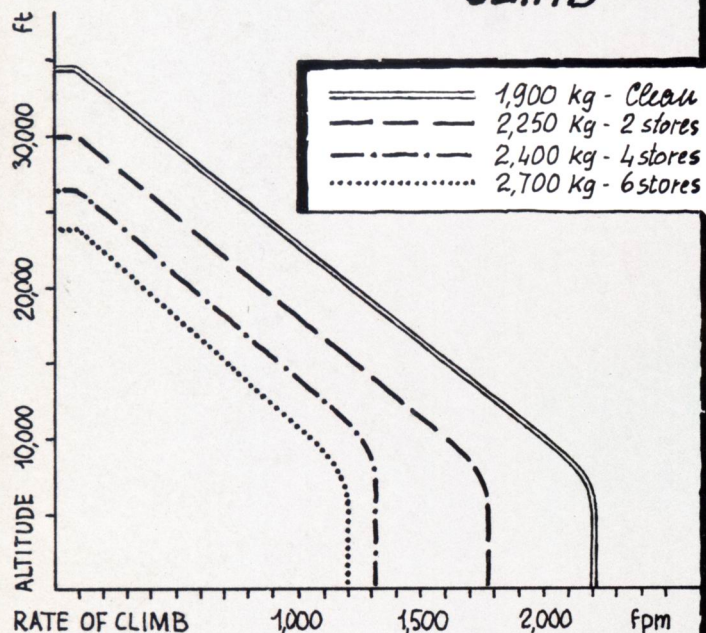
## TAKE-OFF



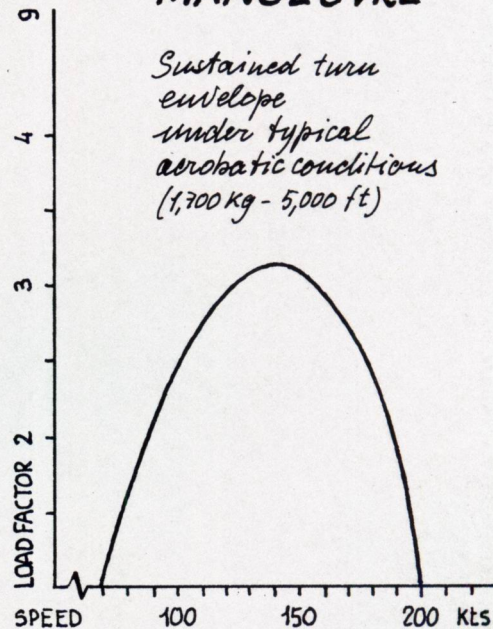
## LANDING



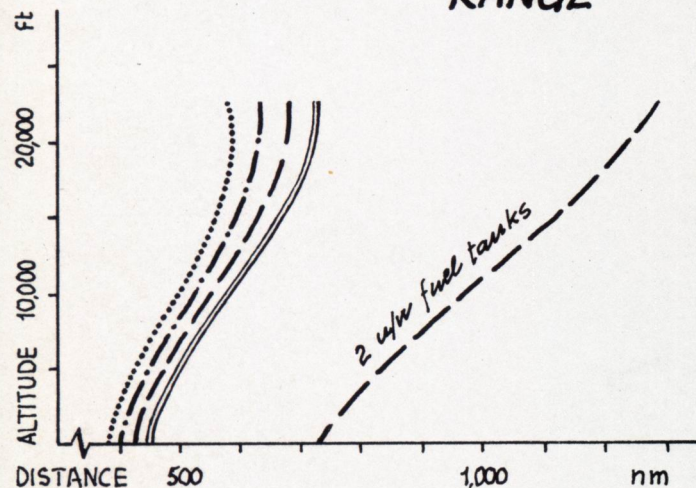
## CLIMB



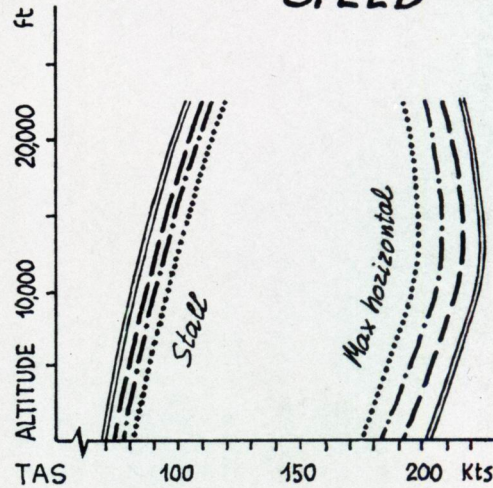
## MANOEUVRE



## RANGE



## SPEED









**≡PILATUS≡**

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